UPPER ARKANSAS RIVER CONSERVATION RESERVE ENHANCEMENT PROGRAM PERFORMANCE REPORT

BY THE

STATE OF KANSAS October 1, 2011 – September 30, 2012



Landowner Tom White visits with KDA's Gene McFall about drought impacts on his CREP grass stands while Rick Rogers from NRCS and Mark Goudy from FSA share insights regarding strategies for meeting the challenging conditions in SW Kansas.





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Executive Summary

The Conservation Reserve Enhancement Program (CREP) in Kansas is a federal – state partnership created for enhancing water conservation efforts along the Upper Arkansas River corridor from Hamilton County to Rice County. The Upper Arkansas River (UAR) CREP has been officially approved and operating for five years; this annual report provides a synopsis of the implementation activities and progress to date.

CREP is a specialized version of the Conservation Reserve Program (CRP) in which the Farm Service Agency (FSA) of the United States Department of Agriculture (USDA) and the state of Kansas have mutually agreed to address specialized natural resource concerns. The Natural Resources Conservation Service (NRCS) is USDA's provider of technical services to producers who are implementing FSA's CREP contracts in the field. The Kansas Department of Agriculture - Division of Conservation (DOC) is the primary coordinator acting to administer the program in concert with numerous other state, local, and private partners including the Kansas Water Office, Kansas Department of Agriculture - Division of Water Resources, Kansas Department of Wildlife, Parks and Tourism, Kansas Department of Health and Environment, Kansas Geological Survey, Kansas State University, Groundwater Management Districts #3 and #5, and Pheasants Forever.

The Upper Arkansas River CREP is a voluntary, incentive based program allowing producers to enroll irrigated acres in targeted, eligible areas for 14-15 year contracts with FSA, permanently retire the associated state water rights on the enrolled acres, and establish an approved land cover (typically a native grass) on the same acreage. The producer receives an upfront, incentive payment from the DOC and an annual rental payment, plus additional cost share opportunities for specific conservation practices from FSA.

Groundwater is the dominant source of water for all uses in the basin, and aquifer declines are a serious concern. Therefore, water conservation is the main management objective in the Upper Arkansas CREP, but the program also provides other resource benefits including soil conservation, water quality protection, wildlife habitat enhancement, and energy savings. The majority of irrigated acres being enrolled have been on highly erodible, sandhills soils that are unsuitable for dryland farming.

One of the most significant merits of the program to date has been establishing cover on these highly erodible lands. The extremely sandy and fragile, windblown soils of the sandhills will be very difficult to revegetate when irrigation is no longer possible after crop production runs out due to groundwater declines. The CREP program has given these area producers a viable option, incentive and financial opportunity for starting native grass stands and other conservation covers while limited irrigation water is still available.

As of September 30, 2012, a total of 91 state CREP contracts on 15,092 acres have been approved by the state of Kansas. These contracts have resulted in the permanent retirement of 30,734 acre-feet of annual water appropriation on 106 water rights from 138 wells. The contracts represent a total of \$910,272 in state sign-up payments to producers over the past four years. These payments are matched by total annual producer payments from FSA totaling about \$1,607,000 per year over the 14 – 15 year life of the CREP contracts. Since December 6, 2007, a total of \$6,773,131 from state, local and private expenditures has been made in support of the CREP project. The state of Kansas has again met its financial commitment to provide at least 20 percent of the total federal costs of the program through a combination of direct payments, technical assistance and in-kind contributions with at least 10 percent coming from direct match.

Especially during 2011 and 2012, a severe and prolonged drought took a serious toll on the ability of participating landowners to both establish new stands of grass, as well as to maintain existing stands of well established grass. DOC, FSA, NRCS and the other CREP partners have been very active this year assisting enrollees with compliance related issues and identifying alternative vegetative and cultural practices which can keep the objectives of the program in a mode of successful transition and completion. After September 30, 2012, all CREP enrollment is suspended until CRP programs are re-authorized by Congress under a new Farm Bill.

Overview

The 2007 and 2008 Kansas Legislature approved funding for an Upper Arkansas River Conservation Reserve Enhancement Program. CREP is a USDA program that creates individual rules and special conditions and rates for a geographic region or watershed. The USDA and the KWO worked with USDA's FSA and NRCS to develop and launch the program. A Memorandum of Agreement (MOA), signed by Kansas Governor Kathleen Sebelius on November 27, 2007, and by Acting USDA Secretary Charles Conner on December 4, 2007, officially established the Kansas UAR CREP.

The Kansas CREP is a voluntary program that provides incentives and cost sharing to participants who enroll their land into eligible conservation practices such as native vegetation establishment or wildlife conservation for a period of 14 to 15 years. The CREP area lies within 10 counties along the Arkansas River corridor, covering 1,571,440 acres. In the CREP area, 718,683 acres were authorized for groundwater irrigation prior to program start-up. Another approximate 10,680 acres are authorized for irrigation from surface water. Reducing irrigation demands on the stream-aquifer system will help slow the aquifer declines, mitigate the spread of saline waters into the aquifer, and help restore stream and riparian health. The state sought to enroll up to 20,000 acres into the program under the first MOA - 17,000 acres of irrigated land, and 3,000 dryland corners from irrigated circles. In 2011, FSA approved an expansion of the total project size to 28,950 acres with a target goal of 25,950 irrigated acres to be enrolled.

History

The CREP project area lies within the upper Arkansas River basin. Overall, the target area includes portions of ten counties (Hamilton, Kearny, Finney, Gray, Ford, Edwards, Pawnee, Stafford, Barton and Rice counties) and two groundwater management districts (Southwest Kansas Groundwater Management District No. 3 (GMD3) and Big Bend Groundwater Management District No. 5 (GMD5) along the river corridor. The 1,571,440 acre project area has hydrologic interaction with the Arkansas River due to surface flow and groundwater pumping. The main water sources for producers within the project area are local stream / river surface waters, and the alluvial and High Plains aquifers. The Arkansas River flows from headwaters in the Rocky Mountains, and has been diverted for more than 100 years for irrigation in Colorado and Kansas. The river and groundwater system has had several decades of well-documented flow depletions entering the state of Kansas, and groundwater declines in the aquifer are resulting in loss of baseflow to the river, decline in well yields, and in some locations, degradation of groundwater quality.

The Arkansas River is a resource of state and national concern for both water quantity and water quality. The flow into Kansas is extensively controlled though releases from the John Martin Reservoir in eastern Colorado, and is managed through the Arkansas River Compact Administration. Reduced flows as the river entered Kansas, in violation of the compact, have historically resulted in stream flow depletion, groundwater declines, and economic damage. The river is also one of the most saline in the nation where it enters Kansas, a result of the extensive concentration of salts occurring from irrigation use and reuse. The declining flows and deteriorated water quality threaten the viability of this important surface water source in Western Kansas. Correlated with the reduced flow and increasing salinity of the river is the degradation of riparian health and wildlife habitat. Native plant communities have declined, and there has been an extensive and aggressive infestation of tamarisk and other non-native phreatophytes.

Kansas-Colorado Arkansas River Compact

The Kansas-Colorado Arkansas River Compact (Compact) was negotiated in 1948 between Kansas and Colorado with participation by the federal government. Its stated purposes are to settle existing disputes and remove causes of future controversy between Colorado and Kansas concerning the waters of the Arkansas River, and to equitably divide and apportion between Colorado and Kansas the waters of the Arkansas River as well as the benefits arising from John Martin Reservoir.

Kansas filed an original action in the United States Supreme Court, Kansas v. Colorado, No. 105, in 1985 to enforce the terms of the Compact. In 1994, a Special Master appointed by the Court, Arthur J. Littleworth, recommended that the Court determine that Colorado had violated Article IV-D of the Compact by means of post-compact well pumping in Colorado. On May 15, 1995, the Supreme Court agreed. Colorado paid Kansas more than \$35.1 million in damages for Colorado's Compact violations. This money has been deposited in three funds created by statute that specify generally how and where the money will be spent. The acceptable uses of two of these funds are consistent with UAR CREP objectives, while the third is for future litigation. The Water Conservation Projects Fund, now known as the Western Water Conservation Projects Fund after transfer to GMD#3, must be applied to projects within a portion of the CREP area.

The Special Master's fifth and final report to the Supreme Court in January 2008, and the Supreme Court "Judgment and Decree" entered on March 9, 2009, provided that the Supreme Court would retain jurisdiction for a limited period while the states evaluated the sufficiency of the 1996 Colorado Use Rules.

As a result of that evaluation, modifications of the initial judgment and decree were jointly developed by Kansas and Colorado based on decisions by the Special Master and the United States Supreme Court. The decree contains several appendices, such as the hydrologic-institutional model and accounting procedures, which will be used to determine if Colorado is in compliance. The states submitted a modified appendix to the Supreme Court on August 4, 2009, bringing an end to the retained jurisdiction.

CREP Steering Committee

The Upper Arkansas River CREP Steering Committee consists of the Kansas Water Office, the Kansas Department of Agriculture – Division of Conservation, the Kansas Department of Agriculture - Division of Water Resources, the Kansas Department of Wildlife, Parks and Tourism, the Kansas Department of Health and Environment, and the Kansas Geologic Survey. These state agencies are joined by the Farm Services Agency, Natural Resources Conservation Service, Groundwater Management Districts Nos. 3 and 5, and Pheasants Forever (Attachment F).

The steering committee met on September 25, 2012 (Attachment F). Some members attended in the DOC conference room with others participating via teleconference. The purpose of the steering committee was reviewed and the committee was provided an update of the current enrollment. The input of the committee on the success of the CREP program in meeting objectives and ways to improve it will become more and more valuable, as more acres enroll and the impact of the water right retirements and land in a conservation practice begin to become measurable.

The impact of a severe, prolonged drought is the main story of the 2012 fiscal year. Lack of precipitation, high winds and extreme, sustained heat are significantly hampering the efforts of landowners and producers who have CREP enrollments in Southwest Kansas. The drought is exacerbating the need for all producers to irrigate in unusual quantities, and that in turn is increasing stress on the groundwater supplies, water table conditions, and the rate at which aquifer levels are declining. NRCS has formed a technical team of soils and plant specialists, and facilitated field tours and meetings in response to the hardships being incurred by landowners who are trying to establish new grass covers and even to maintain existing grass stands under these conditions. FSA has responded with a schedule of revised cost-share incentives for producers who are re-planting failed cover crops and grass stands due to the drought.

It was again noted that some monitoring activities of the CREP are still premature for the agencies to significantly undertake at this time, or to determine any significant changes in results or impacts due to the CREP project. Even though enrollment is steadily increasing, almost the entirety of the enrollment has been located in areas of the "Tier 1 / Unsuitable soils" which will require continued limited irrigation for another couple of years to establish the vegetative cover. Therefore, there has not yet been substantial water use curtailment to record measurable differences given the enormous amount of irrigation historically established in the area.

The steering committee was informed of the efforts that Kansas had undertaken to increase enrollment and interest in CREP, including recent rental rate increases and by FSA and amendments to the USDA / State of Kansas MOA. FSA issued a national press release on August 23, 2011, announcing that the enrollment limit had been increased to 28,950 acres. The committee was pleased that the enrollment limit was being increased to the extent that currently appropriated money is still available, and that revised irrigated rental rates could help attract more participation, especially in the areas of better soils and stable water tables such as the eastern parts of the project area (i.e. Middle Arkansas region). DOC explained subsequent efforts that were being jointly undertaken with DWR to re-market and promote the CREP program to eligible irrigators in the CREP area in an attempt to increase enrollment during the fall and winter season. In spring 2013, the steering committee will again be updated on field conditions and additional technical team recommendations to re-assess program results prior to summer irrigation.

Although participation in the eastern areas has been disappointing so far, the great merit of the CREP program to date has been realizing a very substantial benefit to the western regions of the project. The extremely sandy and fragile, windblown soils of the sandhills will be very difficult to re-vegetate after the groundwater is depleted and crop production runs out. The CREP program has given these area producers a viable option for starting grass stands while limited irrigation water is still available and the financial opportunity and incentive to do it. This somewhat unexpected result should be highlighted and warrants consideration of similar ways to better utilize the resources of future CREP programming in the Upper Arkansas River Valley of Kansas.

CREP Project Implementation Summary

The CREP program is designed to protect water quality and extend the usable life of the of the High Plains aquifer by establishing conservation practices and retiring the associated water rights on irrigated project lands in Barton, Edwards, Finney, Ford, Gray, Kearny, Pawnee, Rice and Stafford counties. Hamilton County was previously ineligible for the program because it was at a maximum level of acres that could be enrolled in a Conservation Reserve Program (CRP). FSA rules regarding the maximum allowable acres specifically pertaining to CREP program enrollment were changed in 2011. Therefore, Hamilton County is now officially eligible for the program. The Kansas Legislature approved the enrollment limit up to a maximum of 40,000 acres. However, the program cap with FSA was initiated at the 20,000 acre level to stay within a legislative stipulation which allows only one acre of land to be enrolled in CREP for every two acres of current CRP contracts which expire annually. This project cap has since been increased to 28,950 acres.

CREP applications are typically made in the county where the land is located, and all applications are considered on a first-come, first-served basis. Farmers who enroll irrigated cropland in the program and permanently retire their water rights will receive rental payments for 14 to 15 years at rates between \$110 and \$140 per acre per year. Rates vary depending on the Hydrologic Unit Code (HUC) and irrigation system currently in place. Cost-share funds and monetary incentives are available for seeding and well plugging on enrolled land. As a part of CRP, CREP acres are subject to normal FSA haying, grazing, burning, and other management provisions, and they can also be leased for hunting. Producers receive an upfront signing bonus from the state of either \$62 per irrigated acre (Tier 1 Soils) or \$35 per irrigated acre (Tier 2 soils).

The goals of the UAR CREP are to enroll up to 28,950 acres of eligible cropland within the designated area to significantly reduce the amount of irrigation water consumptively used. Water quality will be improved through the reduction of agricultural chemicals and sediment entering waters from agricultural lands, and thereby impeding the spread of poor quality river water into the fresh alluvial and High Plains aquifers. The reduction of water consumption and non-point source contaminants, through permanent retirement of water rights appurtenant to the land enrolled in CREP and the establishment of conservation covers and other resource management practices, will slow the aquifer declines and loss of baseflow, enhance associated wildlife habitat (both terrestrial and aquatic), and conserve energy.

Successfully meeting the goals and objectives of the UAR CREP involves interagency cooperation and adherence to a coordinated implementation plan. The implementation plan covers each agency's responsibility and the step-by-step process for outreach, processing applications, providing technical assistance, and monitoring success.

The UAR CREP is being implemented through continuous signup on a first come, first priority basis, until a county reaches the CREP program maximum for enrolled acres or the federal limit on CRP acreage enrolled in any one county. The application enrollment pattern in the first year demonstrated high interest in December of 2007, and in January / February of 2008, with a peak of more than 13,000 acres offered for enrollment. By March 2008, inquiries slowed, as most landowners had already made decisions on their land if a crop was to be planted during the upcoming season. A number of applications were subsequently withdrawn as some land was sold. Others were also withdrawn as crops were put in, as 2008 was a year of very high commodity prices and escalating land values. There were also a number of applications that ultimately were found to not meet the federal or state eligibility criteria during the review process. Finally, there were some inquiries that ultimately did not result in applications being filed because it initially appeared that the county cap had already been filled for Kearny and Gray counties. One state requirement is that no more than 25 percent of the CREP program acres can be in any one county, which in 2008 was a 5,000 acre cap. That cap has since been raised to 7237.5 acres per county.

At the end of the first fiscal year on September 30, 2008, a total of 6,377 acres had officially been approved for enrollment in the CREP program. A total of 12,871 acre-feet of annual authorized water right allocations associated with these acres had been voluntarily and permanently retired. By September 30, 2009 (the end of the second fiscal year), an additional 4,011 acres had been approved for enrollment, bringing the project total to 10,388 acres. An additional 8,208 acre-feet of annual authorized water right allocations were also retired, bringing the project total to 21,179 acre-feet retired. At the end of the third fiscal year, 378 enrolled acres were added and an additional 634 acre-feet of annual authorized water right allocations were also retired. At the end of the fourth fiscal year, 247 enrolled acres were added, bringing the current project total to 11,013 acres, and an additional 532 acre-fee of annual authorized water right allocations were also retired, bringing the total to 22,245 acre-feet of annual authorized water right allocations retired. By September 30, 2012, 4079 acres were added and a total of 15,092 acres have been enrolled, and 30,734 acre-feet of annual authorized water right allocations have been retired. Most of the enrolled acres are irrigated (99 percent), and 87 percent of those are located in the "Tier 1 / Unsuitable soil" classifications. Nearly all of the acres (99 percent) have been enrolled in the CP2 conservation practice.

Outreach

Public outreach for the UAR CREP was initiated prior to and during the preparation of the project proposal to gather information and assess public support. Many outreach meetings occurred on the UAR CREP throughout Western Kansas and during the legislative session. The implementation team developed an informational brochure and poster about CREP for use during the awareness campaign (attachment A). This brochure and related promotional posters were also updated and revised during the third program year, FY2010, and again in the fourth program year, FY2011.

A coordinated approach to outreach and support will continue through implementation of the program. Much of the initial success of the UAR CREP is a result of strong marketing of the program to interested producers. The outreach was accomplished through direct mailings, newspaper press releases, educational brochures, radio broadcasts and local informational meetings. Each of the agencies cooperating in the program was responsible for the outreach component, but the KWO, DOC, GMD3 and GMD5, and the local conservation districts were especially instrumental, as identified in Attachment A.

Technical Assistance

Technical assistance is provided to the producers enrolled in the UAR CREP by USDA's NRCS and the DOC. Over the brief life of the program, there have been a number of meetings between NRCS and the producers discussing the challenges of transitioning to a permanent cover on soils that are highly susceptible to wind erosion (the majority of the enrolled acres are in this category). These meetings and communications have been even more frequent and heightened with the impacts of the ongoing drought conditions. The process for implementing CREP in Kansas (KCREP_IP_02) has been modified to indicate that NRCS will meet at the CREP site with all new participants (Exhibit C).

A very productive meeting was convened between FSA, NRCS, DOC, KWO, DWR, GMD3 and GMD5 officials in Garden City on February 26, 2009 to discuss the unique challenges, strategies, and techniques of establishing permanent grass covers on highly erodible soils associated with the majority of the CREP enrollment to date. Some very successful grass establishment was developed by the end of the 2010 season. NRCS staff has found a strategy involving an effective combination of cover crops, herbicides, irrigation and summer seeding times which has resulted in many circles of nearly 100 percent CRP grass establishment after just two years. Other county offices are being apprised of the methodologies so that the experience can be re-created in areas where the grass establishment has been difficult.

A second meeting was held in Dodge City at the USDA Service Center on July 7, 2011. Discussion at this meeting focused on the progress of the program including establishment of permanent vegetative cover. NRCS reviewed Kansas Conservation Reserve Program Technical Guidance Number 81, "Guidelines for Cover Crop and Grass Establishment on Sandy Sites Associated with Conservation Reserve Enhancement Program Acres". This guidance document has been updated to provide emphasis on the establishment of a cover crop, weed management, irrigation for establishment, and frequent monitoring. NRCS staff expressed their concern with current conditions resulting from the severe drought being experienced in 2011 and the ability of participants to irrigate grass stands for establishment. The full effects of the drought on CREP stands will not be known for a few years, but recent observations are not positive. District conservationists have reported that some stands considered to be established in 2010 appear to have died in 2011. These stands will need to be evaluated in the following growing seasons to determine their post-drought status. There have also been reports from participants that they were unable to irrigate or that their ability to irrigate has been limited. Some were due to their location in areas of the aquifer that are severely drawn down while others only experienced the seasonal draw down of mid and late summer. The current conditions of the drought-stricken areas will challenge CREP participant's ability to establish the permanent cover required by the program.

NRCS conducted a field tour of selected CREP sites in Kearny County on May 22, 2012. As the drought had continued and worsened over the 2011-2012 winter, it became even more apparent that alternative strategies would be necessary to re-establish grass stands that were regressing to drastically low populations of desired prairie mixture species. After convening a technical team of soil and plant specialists, NRCS conducted sampling of sites which indicated problems or issues which might be resolved through alternative cropping or cultural practices. During the summer, the Kansas Department of Agriculture also conducted chemical sampling on the same sites for the purposes of determining any possible pesticide residual effects which could be contributing to plant deterioration. NRCS conducted a meeting with 30 landowners in Garden City on November 13, 2012, to communicate the findings of the research effort and to convey recommendations for future planting of cover crops and grasses. At the meeting, FSA announced its revised schedule of cost-share incentives for producers who will need to re-plant during the 2013 season. DOC, FSA and NRCS discussed compliance issues with the produces. All parties are in agreement that until normal precipitation patterns resume, no requirements will be enforced to re-cultivate fields with minimal cover that are in danger of blowing if adequate irrigation water is unavailable. However, each CREP contract owner who is facing establishment compliance issues because of drought related effects will still be required to have a review and plan approved by his or her local FSA county committee.

Agency and Organization Cooperation

The *Kansas Water Office (KWO)*, the state's planning agency for water issues, provides direction for the CREP program development. KWO contributes to public outreach through presentations at the Upper Arkansas Basin Advisory Committee and Kansas Water Authority meetings and to other interested stakeholders. KWO works collaboratively with DOC and each of the agencies identified below to prepare and provide USDA with annual CREP progress reports. The KWO is also the lead on amending the CREP Agreement with USDA. The KWO director originally administered the Water Conservation Projects Fund for projects in the Upper Arkansas River corridor that provide water conservation, efficiency gains and aquifer recharge. Legislative directives from the 2008 session transferred the fund and administrative duties to GMD3. The KWO director continues to review and give approval for proposed projects recommended by the GMD3 and the Arkansas River Litigation Funds Advisory Committee, with input from the DWR chief engineer. The use of these funds is consistent with the purposes of CREP.

The *Kansas Department of Agriculture - Division of Conservation (DOC)* (formerly *State Conservation Commission (SCC)*) coordinates with local groundwater, watershed and county conservation districts, state and federal agencies, and other conservation partners to implement programs that improve water quality, reduce soil erosion, conserve water and reduce flood potential. DOC administers the state portion of CREP. DOC also is responsible to contract with eligible participating entities for the state upfront incentive payments (SUPs); to review, and make assurances that all CREP eligibility criteria are met and correctly documented; to assure that the relevant water right is properly and permanently dismissed; and to provide appropriate recommendations regarding final approval of FSA CREP applications. The DOC also administers a similar, solely state funded water right retirement program (Water Transition Assistance Program). DOC utilizes an existing staff position as the State CREP Coordinator to facilitate and oversee CREP in the Upper Arkansas basin.

The *Farm Service Agency (FSA)* is the lead USDA agency for CREP. FSA provided the first public announcement of the program signups and made broad outreach to all potentially eligible persons. FSA field office staff work with landowners and producers to determine if CREP is a program that fits for their acreages and circumstances. FSA initiates the contract with interested parties; provides estimates of payments, and works to determine suitable conservation practices. Final approval of contracts comes from FSA county committees. FSA has no responsibility for the water right terminations, but coordinates with DOC and DWR as to the sufficiency of the voluntary dismissals.

The *Kansas Department of Agriculture - Division of Water Resources (DWR)* provides verification of water rights in good standing, administration of retired water rights, issuance of term permits, well administrations and monitoring of aquifer levels and streamflows. DWR has and will continue to provide legal partitioning of water rights, as necessary. This agency assists the Arkansas River Compact Administration with compact compliance. The chief engineer of DWR also reviews proposed project applications for water conservation and efficiency in the Upper Arkansas River basin through the former Water Conservation Projects Fund, now known as the Western Water Conservation Projects Fund, in coordination with the director of KWO. These efforts are consistent with the CREP objectives.

The Kansas Department of Health and Environment (KDHE) monitors surface water quality in the Arkansas River and tributaries. Activities include collection and preparation of chemical, bacteriological and radiological lab samples taken from Arkansas River at up to seven sites located between Coolidge and Great Bend, and analysis for chemistry, microbiology and radiological content of samples. KDHE coordinates water quality issues and meetings with Colorado and other Kansas state agencies, and stakeholders.

The *Kansas Geological Survey (KGS)* provides annual monitoring of aquifer levels. KGS also provides technical studies on the salinity fate and transport, aquifer characterization, and groundwater modeling. The KGS maintains a long-term research site for investigating phreatophyte and stream-aquifer interactions in

the Arkansas River valley at the USGS gage site northeast of Larned, within the CREP project area. Most of the wells are screened in the alluvial aquifer and a few are screened in the underlying High Plains aquifer. Most of the wells are instrumented with pressure transducers that record water levels on a 15 minute time interval year round. Periodic measurements of specific conductance are made in the wells and at least one sample a year is collected from most of the wells. In future years, data from this site may be used along with other sites with water-level data in the CREP area in conjunction with the model for the Middle Arkansas River subbasin to determine the effect of reduced pumping from CREP on the system.

Kansas Department of Wildlife, Parks and Tourism (KDWPT) provides fish and wildlife population monitoring. KDWPT conducts wildlife and habitat surveys through several programs including stream monitoring and assessment and shorebird surveys. KDWPT conducts statewide stream surveys to document the current range and distribution of stream species. Since 2002, KDWPT has coordinated a volunteer effort to survey shorebirds at wetlands throughout Kansas. Portions of these ongoing survey efforts as well as additional wildlife population monitoring activities can serve as in-kind contribution towards the CREP project. KDWPT monitors visitation rates at Cheyenne Bottoms Wildlife Area, to be used in evaluation of a CREP objective.

Groundwater Management Districts (GMD3 and GMD5) monitor water levels, collect water quality samples, recommend water management actions to the chief engineer, review and advise on water conservation projects in the Upper Arkansas River valley and promote water conservation. Both GMDs have sponsored stakeholder meetings to help explain and promote the Upper Arkansas River CREP. The GMDs have also provided technical assistance to interested parties on partitioning of water rights or fields to meet both the CREP eligibility criteria and the needs of the producer.

Kansas State University (K-State) has provided public outreach support to the cooperating state and local agencies involved with this CREP submission and implementation. Extension agents with expertise in programmatic areas important to the program are available to answer questions posed by users of the program. K-State Cooperative Extension has established outreach networks to transfer important information and results to clientele and end users of program information. K-State also has the capacity to analyze and interpret economic impacts as the CREP program is further implemented. These changes include both positive and negative impacts in the basin communities. Positive impacts will result from changes in the environment as less water is diverted for irrigation and remains in the stream flow and aquifer, and the useable life of the aquifer is extended. Negative impacts result from decreased economic activity as land is removed from irrigated agricultural production, whether temporary or permanent.

Natural Resources Conservation Service (NRCS) provides technical assistance on CREP contracts to create the conservation plan of operations and implement the approved practices. NRCS employees evaluate the offered acres with the applicant to determine the appropriate suite of practices to meet needs of the land and producer. Specifications for practice implementation are documented and provided to the participant on conservation practice worksheets. NRCS personnel then follow-up with participants by making site visits to evaluate progress, and by making recommendations to help with management decisions.

Pheasants Forever (PF) is a national non-profit conservation organization dedicated to the conservation of pheasant, quail, and other wildlife. PF members are a diversified group of hunters, non-hunters, farmers, ranchers, landowners, conservation enthusiasts and wildlife officials organized in local chapters who work through fundraising and project development efforts to make a difference by creating habitat, restoring wetlands and protecting prairies. They also promote cooperative endeavors through public awareness, education and land management policies and programs.

Finney

Hamilton

Ford

Arkansas River

Upper Arkansas River Basin

CREP Counties

HUC- 8 Watershed

CREP Project Area

Tier 1 Soils Unsuitable for Dryland Agriculture

Tier 1

Tier 2

Figure 1: Map of Upper Arkansas River CREP Eligible Project Area

CREP Program Implementation Summaries

Land Conserved

As of September 30, 2012, the total amount of land which has been offered and approved for enrollment into the CREP program is 15,092 acres, as detailed in the table below (see maps of CREP counties showing location of acres enrolled in Attachment D).

| | Acres Approved for Enrollment: December 20, 2007 to September 30, 2012 | | | | | | | |
|----------------|--|---|---|---|---|--|--|--|
| CREP County | Acres Approved December 20, 2007 – September 30, 2008 | Acres Approved October 1, 2008 – September 30, 2009 | Acres Approved October 1, 2009 – September 30, 2010 | Acres Approved October 1, 2010 – September 30, 2011 | Acres Approved October 1, 2011 – September 30, 2012 | Total Acres Approved since Program Initiation | | |
| Barton | | | | | | | | |
| Edwards | | | | | | | | |
| Finney | 129 | 1,137 | (- 494)* | | 1,338 | 2,110 | | |
| Ford | | | | | | | | |
| Gray | 1,802 | 2,018 | 872 | 247 | 1,088 | 6,028 | | |
| Hamilton | | | | | | | | |
| Kearny | 4,205 | 856 | | | 1,522 | 6,582 | | |
| Pawnee | 241 | | | | 131 | 372 | | |
| Rice | | | | | | | | |
| Stafford | | | | | | | | |
| Total | 6,377 | 4,011 | 378 | 247 | 4,079 | 15,092 | | |

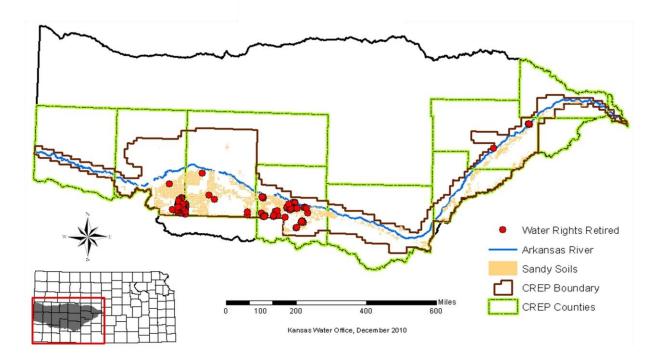
^{*494} acres were withdrawn from state contracts prior to final CRP-1 approval by FSA

Water Conserved

The total amount of water rights that have been offered and accepted for permanent retirement under state approved contracts from the beginning of enrollment on December 20, 2007 through September 30, 2012, are shown in the table below. To date, a total of 30,734 acre-feet of annual authorized water right allocation has been permanently retired from irrigation through enrollment into the Upper Arkansas River CREP.

| CF | REP Authorized Water Right Allocation Pern | nanently Retired: 2007 - 2012 |
|----------------|---|---|
| CREP County | Authorized Quantity (Acre-Feet) of Annual Water Right Allocation Permanently Retired on State Contract Approved Acres | Number of Irrigation Wells Being Permanently Retired on State Contract Approved Acres |
| Barton | | |
| Edwards | | |
| Finney | 3816 AF | 17 |
| Ford | | |
| Gray | 12,652 AF | 54 |
| Hamilton | | |
| Kearny | 13,680 AF | 51 |
| Pawnee | 586 AF | 16 |
| Rice | | |
| Stafford | | |
| Total | 30,734 AF | 138 |

Figure 2: Map of Upper Arkansas River CREP Retired Water Rights



Groundwater Monitoring Activities

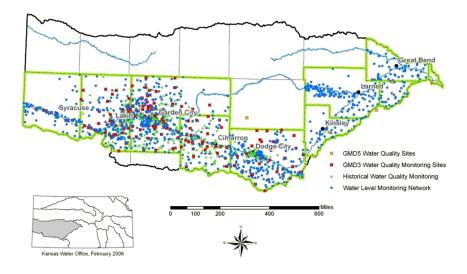
The majority of the acres enrolled in the Upper Arkansas CREP are requiring limited irrigation to get a permanent vegetative cover established on soils highly susceptible to wind erosion. The current drought will further necessitate that additional irrigation water be applied to re-start cover crops and grass stands that have been damaged, in addition to recent enrollments that are just getting started. Therefore, there will still be minimal reductions in pumping that will likely be reflected in the last measurements from the annual groundwater level monitoring program (January, 2012). Many of the additional acres approved during FY2009, FY2010, FY2011 and FY2012 did not get contracts established until mid-year. However, groundwater level measurements and annual water use reports are being collected for the CREP project area (average groundwater levels and a map of the location of monitoring wells are provided in Attachment E.

Water levels have been monitored at least annually at numerous locations in the CREP counties. Figure 3 includes the locations of historical water level measurements in the area. GMD5 obtains water level measurements from 25 wells in the CREP area. Annual measurements are collected from 14 of these wells and quarterly measurements of 11 wells are planned to continue.

Water levels within the boundaries of the CREP area, particularly in the areas where contracts are approved, will be measured over time. One option is to compare monitored changes with predicted changes based on the Middle Arkansas subbasin and GMD3 computer modeled scenarios. The Kansas Geological Survey is also working cooperatively with DWR and GMD3 to enhance the monitoring network for the aquifer close to the retired CREP acres and water rights in Kearny, Finney and Gray counties. Improvements include providing additional annual monitoring wells and increasing the measurement frequency, equipping some key well sites with pressure transducers and temperature loggers, and designating some wells as index calibration wells. Since a great deal of the enrollments in Gray and Kearny counties are in very close proximity, the establishment of such an enhanced monitoring program would result in some very specific information about the effects of substantial water right retirements in these highly localized areas.

Figure 3: Upper Arkansas River CREP Water Quality and Water Level Monitoring

Groundwater quality and water level well locations within the CREP counties



Annual Irrigation Water Usage in CREP Area: 2007 - 2011

Water use reports of authorized acres actively being irrigated each year have been received and verified by DWR for the 2007 – 2011 reporting years. Reported irrigation water use and the number of actual irrigated acres within the CREP Project Area for 2007, 2008, 2009, 2010 and 2011 are shown in the table below.

| CRE | CREP Project Area Reported Irrigated Water Use and Irrigated Acres: 2007 - 2011 | | | | | | |
|---|---|---|--|--|--|--|--|
| County | 2007 Reported Irrigated Acres in CREP Project Area | 2007 Irrigation Reported Water Use (AF) in CREP Project Area | 2008 Reported Irrigated Acres in CREP Project Area | 2008 Irrigation Reported Water Use (AF) in CREP Project Area | 2009 Reported Irrigated Acres in CREP Project Area | 2009 Irrigation Reported Water Use (AF) in CREP Project Area | |
| Barton | 16,599 | 15,898 | 15,687 | 15,157 | 16,415 | 15,133 | |
| Edwards | 35,741 | 30,375 | 36,128 | 38,681 | 36,313 | 35,896 | |
| Finney | 204,649 | 248,916 | 200,856 | 293,357 | 197,894 | 238,180 | |
| Ford | 42,898 | 44,833 | 41,822 | 58,260 | 41,213 | 44,889 | |
| Gray | 81,547 | 94,995 | 82,232 | 105,570 | 81,916 | 92,088 | |
| Hamilton | 10,899 | 13,270 | 12,570 | 19,424 | 12,679 | 15,707 | |
| Kearny | 86,387 | 126,609 | 106,934 | 191,013 | 110,314 | 165,931 | |
| Pawnee | 48,709 | 38,983 | 49,792 | 41,714 | 49,550 | 44,233 | |
| Rice | 336 | 281 | 331 | 221 | 331 | 230 | |
| Stafford | 628 | 601 | 628 | 552 | 628 | 695 | |
| Total | 528,393 | 614,761 | 546,980 | 763,950 | 547,253 | 652,982 | |
| CREP Project Area Reported Irrigated Water Use and Irrigated Acres: 2007 - 2011 | | | | | | | |
| CRE | EP Project Are | ea Reported Irr | igated Water | Use and Irriga | ted Acres: 20 | 07 - 2011 | |
| County | 2010 Reported Irrigated Acres in CREP Project Area | 2010 Irrigation Reported Water Use (AF) in CREP Project Area | 2011 Reported Irrigated Acres in CREP Project Area | 2011 Irrigation Reported Water Use (AF) in CREP Project Area | ted Acres: 20 | 07 - 2011 | |
| | 2010 Reported Irrigated Acres in CREP | 2010 Irrigation Reported Water Use (AF) in CREP | 2011 Reported Irrigated Acres in CREP | 2011 Irrigation Reported Water Use (AF) in CREP | ted Acres: 200 | 07 - 2011 | |
| County | 2010 Reported Irrigated Acres in CREP Project Area | 2010 Irrigation Reported Water Use (AF) in CREP Project Area | 2011 Reported Irrigated Acres in CREP Project Area | 2011 Irrigation Reported Water Use (AF) in CREP Project Area | ted Acres: 20 | 07 - 2011 | |
| County | 2010 Reported Irrigated Acres in CREP Project Area | 2010 Irrigation Reported Water Use (AF) in CREP Project Area | 2011 Reported Irrigated Acres in CREP Project Area | 2011 Irrigation Reported Water Use (AF) in CREP Project Area | ted Acres: 20 | 07 - 2011 | |
| County Barton Edwards | 2010 Reported Irrigated Acres in CREP Project Area 16,064 36,875 | 2010 Irrigation Reported Water Use (AF) in CREP Project Area 17,621 38,534 | 2011 Reported Irrigated Acres in CREP Project Area 16,172 36,580 | 2011 Irrigation Reported Water Use (AF) in CREP Project Area 25,239 48,840 | ted Acres: 200 | 07 - 2011 | |
| County Barton Edwards Finney | 2010 Reported Irrigated Acres in CREP Project Area 16,064 36,875 196,224 | 2010 Irrigation Reported Water Use (AF) in CREP Project Area 17,621 38,534 271,887 | 2011 Reported Irrigated Acres in CREP Project Area 16,172 36,580 193,792 | 2011 Irrigation Reported Water Use (AF) in CREP Project Area 25,239 48,840 34,1958 | ted Acres: 20 | 07 - 2011 | |
| County Barton Edwards Finney Ford | 2010 Reported Irrigated Acres in CREP Project Area 16,064 36,875 196,224 41,788 | 2010 Irrigation Reported Water Use (AF) in CREP Project Area 17,621 38,534 271,887 47,235 | 2011 Reported Irrigated Acres in CREP Project Area 16,172 36,580 193,792 42,903 | 2011 Irrigation Reported Water Use (AF) in CREP Project Area 25,239 48,840 34,1958 72,143 | ted Acres: 20 | 07 - 2011 | |
| County Barton Edwards Finney Ford Gray | 2010 Reported Irrigated Acres in CREP Project Area 16,064 36,875 196,224 41,788 79,321 | 2010 Irrigation Reported Water Use (AF) in CREP Project Area 17,621 38,534 271,887 47,235 96,563 | 2011 Reported Irrigated Acres in CREP Project Area 16,172 36,580 193,792 42,903 74,420 | 2011 Irrigation Reported Water Use (AF) in CREP Project Area 25,239 48,840 34,1958 72,143 112,065 | ted Acres: 200 | 07 - 2011 | |
| County Barton Edwards Finney Ford Gray Hamilton | 2010 Reported Irrigated Acres in CREP Project Area 16,064 36,875 196,224 41,788 79,321 12,585 | 2010 Irrigation Reported Water Use (AF) in CREP Project Area 17,621 38,534 271,887 47,235 96,563 18,235 | 2011 Reported Irrigated Acres in CREP Project Area 16,172 36,580 193,792 42,903 74,420 12,265 | 2011 Irrigation Reported Water Use (AF) in CREP Project Area 25,239 48,840 34,1958 72,143 112,065 22,219 | ted Acres: 200 | 07 - 2011 | |
| County Barton Edwards Finney Ford Gray Hamilton Kearny | 2010 Reported Irrigated Acres in CREP Project Area 16,064 36,875 196,224 41,788 79,321 12,585 103,754 | 2010 Irrigation Reported Water Use (AF) in CREP Project Area 17,621 38,534 271,887 47,235 96,563 18,235 168,632 | 2011 Reported Irrigated Acres in CREP Project Area 16,172 36,580 193,792 42,903 74,420 12,265 103,211 | 2011 Irrigation Reported Water Use (AF) in CREP Project Area 25,239 48,840 34,1958 72,143 112,065 22,219 174,369 | ted Acres: 200 | 07 - 2011 | |
| County Barton Edwards Finney Ford Gray Hamilton Kearny Pawnee | 2010 Reported Irrigated Acres in CREP Project Area 16,064 36,875 196,224 41,788 79,321 12,585 103,754 50,130 | 2010 Irrigation Reported Water Use (AF) in CREP Project Area 17,621 38,534 271,887 47,235 96,563 18,235 168,632 53,645 | 2011 Reported Irrigated Acres in CREP Project Area 16,172 36,580 193,792 42,903 74,420 12,265 103,211 52,243 | 2011 Irrigation Reported Water Use (AF) in CREP Project Area 25,239 48,840 34,1958 72,143 112,065 22,219 174,369 68,733 | ted Acres: 200 | 07 - 2011 | |

Summary of Non-Federal Program Expenditures

The total federal costs of the program to date are \$21,274,225. The state of Kansas, with its partners of other agencies, conservation districts, Groundwater Management Districts and Pheasants Forever have provided a cost share that meets or exceeds the required 20 percent match of federal costs. The state of Kansas agreed to pay not less than 20 percent of the program costs, as required for a CREP program, through a combination of direct payments, technical assistance and in-kind contributions. No less than 10 percent of this match is in direct match. Since December 6, 2007, a total of \$6,773,131 of non-federal expenditures has been made in support of the CREP project. The Kansas state direct match now totals \$4,919,324 with \$910,272 having being paid to producers for sign-up incentives on enrolled irrigated acres.

| Direct Match to Federal D | ollars from October | 1, 2011 to September 30, 2012 |
|---|---------------------|--|
| Organization | Amount | Activities |
| KDA – Division of Conservation* State Upfront Payments | \$245,001 | State Sign-up-payments to CREP participants. |
| State CREP Coordinator | \$44,433 | Coordinate implementation of program with FSA, Conservation Districts, NRCS, and state agencies. |
| KDA – Division of Conservation* | - | Cost share on well plugging and other allowed practices. |
| Western Water Conservation Project Funds | \$291,852 | Alternate Delivery route, ditch lining, Lake McKinney storage capacity and bypass |
| Pheasants Forever/Quails Forever | - | Cost share on seeding; loan of grass seeder. |
| Kansas Water Office | - | Cost share on tamarisk control, or wetland bonus payments |
| TOTAL DIRECT | \$581,286 | |

^{*}The KDA – Division of Conservation was formerly the State Conservation Commission

| | | State Upfron | t Payments / | Approved by | County** | |
|----------|---|---|---|---|---|--------------|
| COUNTY | State Upfront Payments SFY2008 | State Upfront Payments SFY2009 | State Upfront Payments SFY2010 | State Upfront Payments SFY2011 | State Upfront Payments SFY2012 | COUNTY TOTAL |
| Barton | | | | | | |
| Edwards | | | | | | |
| Finney | \$8,022 | \$33,756 | \$2,677 | | \$78,251 | \$122,707 |
| Ford | | | | | | |
| Gray | \$156,954 | \$44,856 | \$75,618 | \$15,320 | \$64,419 | \$357,167 |
| Hamilton | | | | | | |
| Kearny | \$260,632 | \$37,510 | \$15,620 | | \$94,241 | \$408,004 |
| Pawnee | \$14,291 | | | | \$8,103 | \$22,394 |
| Rice | | | | | | |
| Stafford | | | | | | |
| TOTAL | \$439,901 | \$116,122 | \$93,916.70 | \$15,320.20 | \$245,011 | \$910,272 |

^{**}These figures reflect the State of Kansas Fiscal Years from program start date on December 20, 2007 through September 30, 2012

As of September 30, 2012, a total of **\$910,272** has been expended by the Division of Conservation for the State Upfront Payments (SUPs) in 91 separate state contracts to producers who have been approved and enrolled in the CREP program. Based on these 91 contracts, producers will receive about \$1,607,000 annually in direct payments from FSA over the 14-15 year period of the CREP contracts. Producers may also receive other cost-share help from FSA.

| Services by Organi | Services by Organizations from October 1, 2011 to September 30, 2012 | | | | | |
|--|--|---|--|--|--|--|
| Organization | Actual | Activities | | | | |
| Technical Assistance | | | | | | |
| Western Water Conservation Projects Fund Management | \$48,266 | Preferred interstate, grant applications, general TA water rights, laws and issues | | | | |
| KDA – Div. of Water Resources | \$1,935 | CREP database maintenance, water right reviews, divisions and retirements for applications. | | | | |
| Kansas Geological Survey | \$73,400 | Water level monitoring, database management, phreatophyte investigations, TA, water right communication, modeling, river water quality and practical saturated thickness work | | | | |
| Kansas Dept of Wildlife, Parks and Tourism | \$14,592 | Wildlife and Fish population investigations in CREP counties. | | | | |
| Kansas Conservation Districts | - | No activity to report | | | | |
| State & Local In-kind | | | | | | |
| KDA – Div. of Conservation* | \$314 | Outreach | | | | |
| Water Conservation Projects Fund | \$16,200 | Alternative delivery system, storage capacity, and efficiency improvements (ARLFSC time) | | | | |
| Big Bend Groundwater Management District #5 | \$38,000 | Water level measurements, meter compliance, water banking, CREP assistance and clerical pay. | | | | |
| Southwest Kansas Groundwater Management District #3 | \$93,646 | Water management, stakeholder assistance in CREP area, program promotion | | | | |
| Kansas Department of Health and Environment | \$14,348 | Ark River Coordination with Colorado, Sampling of Ark River water quality. | | | | |
| Kansas Water Office | \$1,459 | Weather modification and phreatophyte, and CREP activities | | | | |
| TOTAL TA / In-Kind | \$302,160 | | | | | |

^{*}The KDA – Division of Conservation was formerly the State Conservation Commission

Progress on CREP Objectives (12 objectives)

1. Enroll a maximum of 28,950 acres into CREP in the project priority area (25,950 irrigated acres, 3,000 from dryland pivot corners as part of whole field enrollment), with a goal of up to 18,600 acres put into native grass.

As of September 30, 2012, a total of 15,092 acres have been offered, accepted and enrolled into the CREP program. Of the total number of acres currently offered, only 1.9 percent (296 acres) was farmed dryland. Offers which are predominately "Tier 2 soils" comprise 11.1 percent (1,679 acres) of the total approvals to date. This objective is 57 percent complete.

2. Reduce the application of groundwater for irrigation in the targeted area by 45,125 acre-feet, annually, with the enrollment of 25,950 irrigated acres.

As of September 30, 2012, a total of 30,734 acre-feet of authorized water rights for irrigation have been permanently retired. This rate is averaging just over 2 acre feet per acre, a rate higher than estimated in the CREP objective, particularly because the majority of the enrollment in the project area has been in the western counties where the water appropriation allowances are the highest in the state, and some irrigated acreage is authorized on land which is not being enrolled at the irrigated rate due to FSA restrictions. This objective is 68 percent complete.

3. Increase the frequency of meeting minimum desirable streamflows in the Arkansas River at the USGS gaging stations at Great Bend and Kinsley by 2020 from 71 percent and 52 percent, respectively, as measured in 1996-2004.

No assessment of this objective has been made as of September 30, 2012. Measurement of the impact of enrollment of acres into the Upper Arkansas River CREP on minimum desirable streamflow will begin after water rights have been terminated and sufficient time has elapsed to have an effect on the system. Most of the acres enrolled have just recently terminated the water rights, or are still allowed temporary limited irrigation to establish vegetation on soils susceptible to wind erosion. Following is a summary of the anticipated methodology for this objective.

There are three components to streamflow: frequency, magnitude and duration. Each of these components will be reviewed at the Great Bend and Kinsley MDS gage. The daily flow from 1960 to 2004 will be summarized into annual data. The summarization parameters include:

- 1. The percent of time the MDS was not met (frequency of excursion).
- 2. The volume of flow less than MDS as calculated by the difference between MDS and reported flow (magnitude of excursion).
- 3. The maximum length in consecutive days that MDS was not met (duration of excursion).

The frequency, magnitude and duration for which MDS was not met will be compared for the pre-CREP years (1960–2006) to the post-CREP years (2007-2012). A nonparametric test, the Wilcoxon rank-sum, will be used to determine if a statistically discernible difference existed between the preand post-CREP period.

The same comparison will be made using the pre and post-CREP period and the average annual Palmer Drought Severity Index (PDSI) for the region in which the MDS gage was located. This will create an index for the antecedent moisture conditions that will be a primary factor in determining each period's flow condition. One would expect that in those regions where the PDSI had become significantly greater (wetter), one should see a concomitant improvement in the magnitude, frequency or duration of the MDS condition.

Finally, the trend for the annual summarizations of the three components of flow will be assessed. This assessment will be used to determine whether there is a discernible trend in the annual frequency, magnitude or duration of minimum desirable stream flows through time (1960-2005).

4. Reduce stream flow transit losses due to inefficiencies in the delivery of the water by improving the channel and canal delivery system.

No official assessment of this objective has been made as of September 30, 2012. Improvements to the stream flow delivery system are underway. Construction is complete on the cleaning and reshaping of the canal used by the South Side Ditch Company to enhance delivery of water to its members and to more efficiently deliver water to the downstream Farmers Ditch Company during a

drought. It's estimated that water delivery to the Farmers Ditch Company via the refurbished canal has at least 15 percent less stream flow transit loss than delivery via the river channel.

5. Reduce the rate of groundwater declines in the alluvial aquifer and the hydraulically connected High Plains aquifer in the CREP area by 2020 from those measured during the winter months for the past five years (2001 – 2005) and ten years (1996-2005).

No assessment of this objective has been made as of September 30, 2012. The impact of enrollment of acres into the Upper Arkansas River CREP on groundwater conditions will be made after water rights have been terminated. At the present time, limited irrigation is still provided on many of the enrolled acres to help establish vegetation, where the soils are highly susceptible to wind erosion. Following is a summary of the anticipated methodology for this objective.

Water levels have been monitored at least annually at numerous locations in the CREP counties. The map below includes the locations of historical water level measurements in the area. GMD5 obtains water level measurements from 25 wells in the CREP area. Annual measurements are collected from 14 of these wells and quarterly measurements of 11 wells are planned to continue. Data collected from each of these measurements will be used to assess the progress towards meeting this objective.

Water levels within the CREP area, particularly in the areas where contracts are approved, will be measured over time. Depending on levels of change, monitored changes could also be compared with predicted changes with computer modeled scenarios. The steering committee is cooperating to create an enhanced monitoring network for the aquifer close to the retired CREP acres and water rights. Possible improvements mentioned include providing additional annual monitoring wells and increasing the measurement frequency, equipping some key well sites with pressure transducers and temperature loggers, and designating some wells as index calibration wells.

6. Reduce the outward migration of river salinity within the High Plains aquifer by 2020 from the currently projected extent based on 1990s groundwater conditions in the Arkansas River valley.

As of September 30, 2012, 15,092 acres have been offered, approved and enrolled into the CREP program. Some of the offered acres are close to the stream, and most are south of the river. An assessment of this objective will be made in the future, once more acres are enrolled, and when most of the wells are permanently turned off. A number of the wells are still in use for limited irrigation to help establish permanent vegetative cover. While no formal assessment of this objective is made at this time, the state's comprehensive water quality monitoring network, as described below, will be used to determine progress in meeting this objective.

Instream water quality and groundwater quality have been recorded historically through monitoring programs at the state and local level. KDHE has a long-standing network of monitoring stations along the Arkansas River from Coolidge to Great Bend. These stations are the foundation for the TMDL work in the Upper Arkansas Basin. Three years (2004 – 2006) of intensive bacteria sampling have been conducted with over 12 sessions of sampling 5 times within 30 days at these stations on the Arkansas River, in accord with K.S.A. 82a-2001, et seq. KDHE has been developing additional TMDLs in the Upper Arkansas Basin in 2011 for the next round of TMDLs on the Arkansas River.

The existing stations will be used to assess future post-TMDL conditions, over the 15 years CREP enrollment period. It is not expected that CREP will have an impact on the overall TDS (Total Dissolved Solids) levels in the river, however improvement is expected in the reduction of the advance of TDS or sulfate into the fresh water aquifers laterally from the river.

Annual groundwater sampling was temporarily suspended by GMD3 in 2011 and 2012 for the 183 monitoring sites in the CREP counties this report period. They were replaced by 40 additional groundwater samples collected for analysis of uranium in the CREP area by the KGS, including the regular suite of analysis. This work was done by KGS as an enhancement to a cooperative river flow sampling project funded by an EPA grant; it evaluates the deposition of uranium in Arkansas River flows. This work should broaden the water quality evaluations of CREP benefits and future management progress.

Further east, groundwater quality monitoring in the area by GMD5 has been conducted for specific projects from 12 wells. This information can provide a basis for comparison in the future.

This data will provide water quality information prior to CREP, and the continuing monitoring program will enable data analysis for documenting impacts of the program. This monitoring, along with the groundwater monitoring for other state initiatives, provides a baseline for post-CREP comparison. Stream and groundwater samples will be analyzed to determine mineral content at a frequency appropriate to determine representative water quality at least on an annual basis. At a minimum, sulfate, selenium and total dissolved solids will be quantified. Groundwater samples will be obtained for analysis and result comparison from wells with an analysis history. Wells with previous data will be monitored from both the alluvial and High Plains aquifers.

7. Reduce the bacterial, nutrient and pesticide levels in the Arkansas River in Edwards and Pawnee counties by 2020 from the 1990 – 2000 levels.

Bacterial impairments under the new state definition are in the middle reaches of the basin. Intense sampling for bacteria after 2015, concentrating on the Kinsley area, is planned. Additional data will be available through the monitoring network as described in Objective #6. However, an assessment of this objective will not be made at this time.

As of September 30, 2012, 372 acres have been enrolled into the CREP program in Pawnee County. No acres have yet been offered in Edwards County.

8. Increase aquifer recharge and wildlife habitat by enrolling 400 acres of playa lakes and soils, and other suitable locations for shallow water development.

As of September 30, 2012, no acres have been formally offered for the CP9 Shallow Water Areas practice. Approximately 8 acres of playa soils occur on acres offered into the CREP program.

9. Reduce agricultural use of highly erodible soils with a goal of enrolling 7,000 acres that are unsuitable for dryland farming.

As of September 30, 2012, approximately 12,104 acres of soils unsuitable for dryland farming have been enrolled in the CREP program. More than 100 percent of this objective has been met.

| Acres Enrolled | l as of September 30, 2012 |
|-------------------------|----------------------------|
| Tier 1 | 1,309 |
| Tier 1 Unsuitable Soils | 12,104 |
| Tier 2 | 1,679 |
| Total Acres Enrolled | 15,092 |

10. Reduce the amount of soil lost to erosion by approximately 80,000 tons per year on all acres enrolled in CREP.

Soil erosion in the Upper Arkansas River Basin occurs primarily due to wind erosion. Water erosion is also a factor in soil erosion in the basin, but to a lesser extent. In comparison, wind erosion can reach 4 tons/acre whereas water erosion would total 0.3 ton/acre on the same soil types with the same cropping patterns and management practices. Factors that affect wind erosion include residue cover, field width, crop rotation intensity, and tillage operations (USDA 2006).

With 15,092 acres enrolled in the CREP program as of September 30, 2012, the amount of soil lost to erosion will be reduced by about 60,368 tons per year. Approximately 75 percent of this objective has been met. In order to help establish vegetative cover, limited irrigation for up to two full calendar years will be a condition on the water right termination for offers with highly erodible soils of factor I-34 or greater. Prior to final contract approval, a conservation plan of operation will be prepared, and limited irrigation may be recommended.

| S | oil Erosion |
|------------------------------|----------------------|
| 4 tons / acre/ year | 15,092 acres |
| Total soil erosion reduction | 60,368 tons per year |

11. Protect the ecological and recreational viability of the Cheyenne Bottoms with improved Arkansas River stream flow, as measured by an increase in the average, annual bird count at the Bottoms in 2015-2023 as recorded from 1996-2004, and with increased human visitation rates in 2015-2023 as recorded from 1996-2004.

No assessment of this objective has been made as of September 30, 2012. The impact of enrollment of acres into the Upper Arkansas River CREP on the ecological and recreational viability of Cheyenne Bottoms will not be discernible until water rights have been terminated and wells turned off. Many application acres just recently had the associated water rights terminated, or have limited irrigation to establish permanent vegetative cover. Monitoring of the average annual bird count and human visitation rates will continue.

12. Reduce energy consumption from an average of 59,850 kW-hr to less than 5,000 kW-hr per pivot for the first two years on pivots enrolled in the CREP. In subsequent years, energy consumption will be reduced to zero, as the pivots eligible for limited irrigation will be removed from the enrolled parcel. Total energy savings for the term of the CREP contracts will approach 8 million kW-hr.

K-State Research and Extension staff provided a rough estimate of energy consumption for a 125 acre center pivot in counties along the Upper Arkansas River. An average energy consumption of 59,850 kW-hr per pivot per year was derived from their estimates. In the first two years of the program, offers made for acres that occur in soils unsuitable for dryland agriculture will have the opportunity to irrigate minimally to ensure establishment of grass cover. Therefore, a small amount of energy consumption will still be experienced in the first years of the program.

With 15,092 irrigated acres enrolled in CREP as of September 30, 2012, more than 7 million kW-hr of energy savings may be achieved each year. 87 percent of this objective has been met.

| Energy Savings | |
|---|--------------|
| Irrigated Acres Enrolled as of September 30, 2012 | 15,092 acres |
| Approximate Number of Center Pivots Retired | 117 pivots |
| Average Energy Consumption per Pivot | 59,850 kW |
| Total Energy Savings per Year (kW) | 7,002,450 kW |

ATTACHMENT A **UPPER ARKANSAS RIVER CREP BROCHURE & POSTER**

ELIGIBILITY CRITERIA

eligibility in advance. Your local FSA office has list of the criteria will help to screen your a data base to screen your application on met to enroll your land in CREP. This partial these criteria.

acre was applied four out of six years 1. At least one-half acre foot of water per (1996-2001).

1-2-3 OF SIGN-UP

At least 50 percent of the maximum

business plan, you'll be working with the USDA-

Farm Service Agency (FSA), Natural Conservation Service (NRCS) and Conservation Commission (SCC).

As you decide whether CREP enrollment fits your

located within the CREP boundary.

BENEFITS TO FARMERS

- Federal annual irrigated rental and maintenance payments for 14 to 15 years.
- (i.e., center pivot corners) that's part of a Rental payment on dryland cropland whole field enrollment. State upfront to dn payment of irrigated acre.
- 50 percent cost share on seeding.
- Pheasants Forever offers to provide up to \$500 per producer to offset farmers' seeding costs.
 - Well plugging cost share of \$1,000/well.
- water area development in Kearney or Bonus payment of \$350/acre for shallow Finney Counties.

The State Conservation Commission will make the state's upfront payments and practice cost

voluntary program are expected

share payments on approved CREP contracts.

Land can be leased for hunting.

ARK RIVER CREP PARTNERS

Working partners include: USDA Farm Service Agency, State Conservation Commission, Natural sas GMD No. 3, Big Bend GMD No. 5, Pheasant Resources Conservation Service, Southwest Kan-



CREP Field. Kearny Co.unty

Jater and So

per Arkan servation

Ver corr

FOR MORE INFORMATION CONTACT Carla Wikoff, USDA-FS/ (785) 529-3534, CARLA.WIKOFF@KS.USDA.GO (785) 296-3600, STEVE. PROST@SCC.KS.GO Steve Frost, CREP Coor State Conservation Com

GMD No. 3, Garden City, (620) 275-7147 GMD No. 5, Stafford, (620) 234-5352 APPLICANTS WATER RIGHT QUESTIONS Kansas Department of Agriculture Water Resources Division (785) 296-6081

FARM SERVICE AGENCIES (FSA)

Any questions on water rights will be referred to the KDA-Division of Water Resources or Groundwater Management District No. 3 or 5. Producers whose land is accepted into the permanently retire the associated water

(620) 792-5329 (620) 659-3142 Edwards Finney Ford Gray

(620) 855-3515 (620) 384-6955 (620) 285-2821 (620) 227-3731 (620) 549-3321 (620) 275-0211 (620) 355-791 Kearny Hamilton

Forbes Indian Grass stand, NRCS 2007

Forever, KGS, KDHE, KDA-DWR and KWO.

CONSERVATION RESERVE ENHANCEMENT PROGRAM

(620) 257-5184

Federal and state eligibility criteria must be

- annual quantity authorized to be diverted under the water right has been used in any three years from 2001 through 2005. 3
 - Half or more of the offered land must be

1. First stop is your local FSA office. FSA

will use a CREP data base to determine whether at least half of the irrigated land offered for enrollment lies within the CREP boundaries and if minimum water use criteria have been met. They also will be able to provide eligible producers with a preliminary estimate of rental and upfront

personnel

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WATER AND SOIL CONSERVATION IN THE UPPER ARKANSAS RIVER CORRIDOR

The Conservation Reserve Enhancement Program affords potential benefits for both farmers and land and water resources in 10 counties along the upper Arkansas River. Landowners who enroll in CREP will receive up to 15 years of rental payments, a state sign-up bonus, and state, federal and private cost-share dollars to put irrigated acres into a conservation planting. The water rights associated with the enrolled land will be permanently retired. Enrollment is on a first-come, first-served basis. Program enrollment is only assured through June, 2011 at this time.

What is CREP?

CREP is a targeted, enhanced Conservation Reserve Program (CRP), a federal program administered by the USDA's Farm Service Agency (FSA). CRP was designed to prevent soil erosion, but also has provided water quality and wildlife habitat benefits. CREP allows the focus to be on a state resource concern; in this case, water conservation.

What are the water and soil benefits?

Reducing irrigation demands on the streamaquifer system will slow aquifer declines. It will also reduce the spread of saline river water into the aquifer and help restore stream and riparian health. Most acres enrolled have highly erodible, sandy soils.

Multi-year transition with limited irrigation allows establishment of cover vegetation. This program provides cash payments for land transition, while irrigation is still possible. Continued, irrigation is permitted to establish a suitable land cover.

Among the approved practices eligible for cost share money are native grass seeding, wildlife habitat establishment, shallow water area construction, wetland restoration and filter strip and riparian buffer installation.

Are there targeted areas?

The program places priority on acreage where the retirement of the land and attendant water rights would have the greatest water conservation benefit and protect highly erodible soils.



Are there wildlife benefits?

The conservation practices to be implemented open a host of opportunities for wildlife and landowner revenue related to hunting bird watching and other forms of eco-tourism.

NEW IN 2011

INCREASED FEDERAL RENTAL PAYMENTS! \$115 TO \$140 PER ACRE UP TO 15 YEARS

EXPANDED CREP ENROLLMENT CAP!

Upper Arkansas River CREP rates for irrigated land are leyed to the hydrologic Unit (IUC@watershed)

| 11030008 | 11030008 | France, | 11030003 | France, | 11030008 | France

| Irrig | Irrigated Rental Rate per Acre by HUC-8 Watershed* | Rate per | Acre by HI | JC-8 Water | rshed* | |
|-------------------------------------|---|----------|------------|------------|----------|----------|
| HUC-8 Watershed | 11030001 11030003 11030004 11030005 11030006 11030008 | 11030003 | 11030004 | 11030005 | 11030006 | 11030008 |
| Center Pivot and Subsurface Drip | \$120 | \$125 | \$140 | \$130 | \$130 | \$135 |
| Flood | \$115 | \$120 | \$130 | \$120 | \$120 | \$125 |

pper Arkansas River CREP

CONSERVATION RESERVE ENHANCEMENT PROGRAM: Water and soil conservation in the Upper Arkansas River corridor.

NEW 2010 ENHANCEMENTS

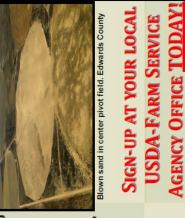
INCREASED FEDERAL RENTAL PAYMENTS! \$115 TO \$140 PER ACRE OVER 14 TO 15 YEARS EXPANDED CREP ENROLLMENT CAP!

BENEFITS TO FARMERS

- . UPFRONT PAYMENT OF UP TO \$62 PER IRRIGATED
- 50 % COST SHARE ON SEEDING
- UP TO \$500 TO OFFSET SEEDING COSTS
- WELL PLUGGING COST SHARE UP TO \$1,000
- RENEWED LANDOWNER REVENUE FROM HUNTING, BIRD WATCHING & ECO- TOURISM
 - ASSURED INCOME WITH ANNUAL CASH PAYMENTS

BENEFITS TO THE REGION

- SLOW AQUIFER DECLINES
- PROTECT LAND FROM SOIL EROSION WITH IRRIGATED
- REDUCE THE SPREAD OF SALINE WATER
 - RESTORE STREAM & RIPARIAN HEALTH



FOR MORE INFORMATION CONTACT: (785) 296-3600, STEVE.FROST@SCC.KS.GOV State Conservation Commission, Steve Frost, CREP Coordinator,



Upper Arkansas River Basir

11030006

11030005

030001

CREP Countles Arkansas River

11030003

HUC-8 Watershed **CREP Priority Areas**

Tier 1 Soils Un Tier 2 Tier 1

Arkansas River dry riverbed as it appears now at Dodge City.

SW Kearny Co. sand dur

21

Attachment B Upper Arkansas River Conservation Reserve Enhancement Program Outreach

<u>December 2007 - December 2008 Outreach for the Conservation Reserve Enhancement Program Events</u> (Brochure distribution and conversation)

- Stakeholder Meeting Garden City, GMD3, December, 2007
- Conservation District Meetings in the 10 counties in CREP area Jan. 11 Feb. 28, 2008
- GMD5 Meeting Stafford, February 7, 2008
- No-till on the Plains Salina, January 2008
- 3i Show Great Bend, May 2008
- Upper Arkansas Basin Advisory Committee public meeting Jetmore, May 21, 2008
- Upper Arkansas Basin Advisory Committee public meeting Garden City, July 16, 2008
- KSU Agronomy Day August 2008
- Kansas Agribusiness Expo November 2008
- CREP Producer Outreach Information Meeting Larned, December 12, 2008; Garden City, December 17, 2008; Dodge City, December 18, 2008

<u>December 2008 - December 2009 Outreach for the Conservation Reserve Enhancement Program</u>

- Garden City Farm Show January 2009
- NRCS All Personnel Meeting Hays, February 11, 2009
- NRCS All Personnel Meeting Scott City, February 12, 2009
- Collaborative Technical Issues Meeting Garden City (FSA, NRCS, SCC, KWO, GMDs), February 26, 2009
- Middle Ark WRAPS Meeting Dodge City (KSU, GMD3), March 3, 2009
- Middle Ark WRAPS Meeting Larned (KSU, GMD5), March 5, 2009
- Upper Ark WRAPS Meeting Garden City (KSU, GMD3), March 10, 2009
- Water and the Future of Kansas Conference Topeka (SCC, KWO Presentation), March 12, 2009
- 3i Show Great Bend, May 2009
- Kansas legislative Field Tour Lakin (SCC, KWO Presentation), June 4, 2009
- Stakeholder Meeting Garden City, GMD3, October, 2009
- Public Information / Education Meeting St. John (w/ GMD5) October 29, 2009

December 2009 - December 2010 Outreach for the Conservation Reserve Enhancement Program

- 3i Show Garden City May 2010
- GMD3 CREP promotion Ongoing

December 2010 - September 2011 Outreach for the Conservation Reserve Enhancement Program

- FSA National Press Release August 23, 2011
- KDA & KWO Kansas Press Release August 23, 2011
- 3i Show Great Bend May 2011
- GMD3 CREP promotion Ongoing

- Second technical meeting preparing for 2011 MOA updates Dodge City, July 7, 2011 at USDA Service Center (DOC, NRCS, FSA, DWR, GMD3, and GMD5 participating)
- September, 2011 DOC sent a directed mailing to 1235 landowners who appeared to have eligible water rights in the project area

October 2011 - September 2012 Outreach for the Conservation Reserve Enhancement Program

- 3i Show Great Bend May 2012
- May 22, 2012 NRCS CREP Drought Impacts Field Tour in Kearny County
- August 2012 KDA field chemical sampling project in Gray, Finney and Kearny counties
- November 13, 2012 NRCS CREP Drought Impacts Landowner Meeting in Garden City
- GMD3 CREP promotion Ongoing

Brochures/Posters

- Updated CREP promotional poster to be distributed in December at CREP informational meetings in December to FSA offices and Conservation Districts
- Updated CREP promotional brochure for distribution by State Conservation Commission at stakeholder meetings in August.
- Updated CREP promotional brochure used at K-State Agronomy Day.
- Updated CREP promotional brochure used at Kansas Agribusiness Expo.

Articles

- Establishment of Upper Arkansas River CREP, (December, 2007, Governor Sebelius and KWO press release)
- <u>Upper Arkansas River CREP Attracts More Than 12,000 Acres in Seven Days</u> (January 2008 KWO HydroGram)
- CREP Conservation Practices Include Aquifer Recharge (January 2008 KWO HydroGram)
- <u>Conservation Reserve Enhancement Program Benefits Water Resources & Farmers</u> (September 2008 KWO HydroGram)
- Response to Hutchinson Daily News editorial by SCC executive director on behalf of KDA, KDWP, and the KWO November 2008)
- Congressional funding measure keeps CRP rolls open (January 2008 HPJ news release)
- Pratt newspaper article on KDWP conducting a wildlife impact survey starting last spring per an article, as part of the CREP effort.

<u>Internet</u>

 Access to various resources and reports on the Upper Arkansas CREP program are continuously updated and made available on the DOC's website at

http://www.ksda.gov/doc/

ATTACHMENT C PROCESS FOR IMPLEMENTING UPPER ARKANSAS RIVER CREP IN KANSAS

FSA Kansas Exhibit 44 (Par. 171, 401)

2-CRP (Rev. 5), KS Amend. 6 August 23, 2011

| STEP | ACTION | RESULT |
|---------------------------------|---|--|
| 1. Initial Application with FSA | a. Producer visits local FSA office and provides a recent water use report with water user permit number for offered acreage. FSA enters water right number in CREP database to determine general eligibility. b. If a water right is ineligible and no registry number is assigned, print a screen capture and send an electronic copy to State CREP coordinator. If ineligible and a registry number is assigned, save the file and notify State CREP coordinator. c. If producer's water right meets basic eligibility as determined by CREP database, producer identifies physical location of acres and CREP practice (identify on an aerial photo). FSA uses CRP-GIS tool, and determine total # acres within CREP boundary and within HUCs. FSA estimates federal payment rate through CREP calculator. FSA reviews with producer total incentive package on another tab (includes state upfront payments, cost share, SIPs, PIPs if apply, etc.) NOTE: FSA follows normal continuous enrollment processing found in 2-CRP, Part 7, Section 3. Producer initiates process by signing CRP-2C and CRP-1. NOTE: Applicant signs CRP-2C and CRP-1 based on application acres. The forms will be finalized based on actual contracted acres after water right review. d. FSA informs producer of process and works in conjunction with NRCS to determine appropriate practice. Producer is provided a packet with the process and practices. Producer is provided a packet with the process and practices. Producer is provided a sheet listing guidelines for cover crop establishment on sandy sites associated with CREP acres. If producer has questions on a water right termination issues; b) KDA-DOC for state upfront payments and Shareholder Agreement; and c) KWO for wetland bonus payment. NOTE: No water right is terminated without an approved, signed CREP contract. | a. FSA enters water right number into database and a register number is automatically assigned. This state developed database indicates eligibility based on water right information and location. b. If ineligible on CREP database, process stops here. Producer can contact DWR or GMD to review water use history. c. Save an electronic copy of estimated total CREP payments and send to CREP coordinator. d. State forms are updated with producer information from CREP Calculator tab. FSA prints out a copy for producer, but send to State staff for additional information. Producer is to sign, get additional signatures if needed, make a copy for personal record, and mail all state forms to State CREP Coordinator. |

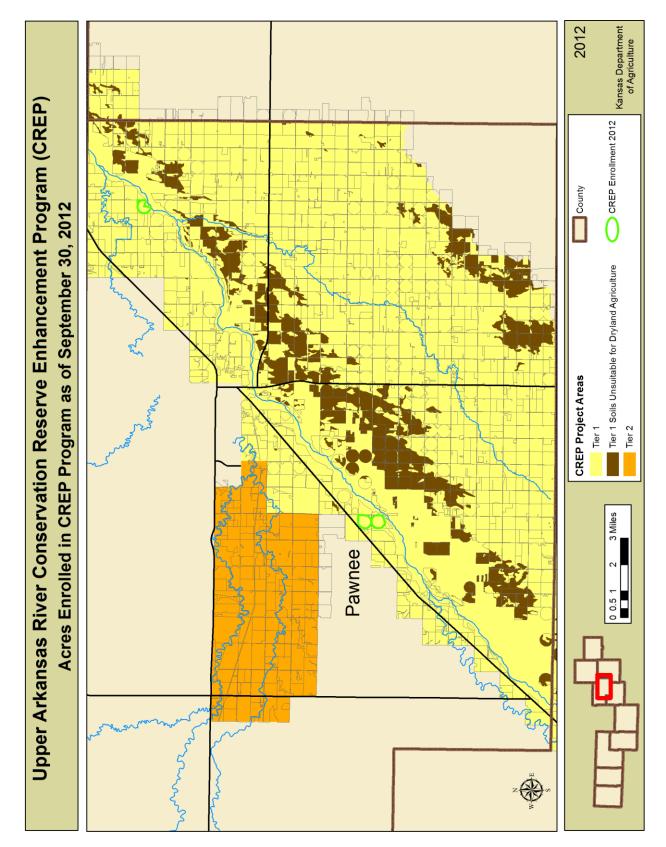
| STEP | ACTION | RESULT |
|--------|---|--|
| 2. FSA | a. Determination of basic Federal CREP Eligibility (FSA County Office) Example: ownership, person, land, practice, cropping history, CRP acreage cap. Ensure all eligibility requirements as provided in subparagraph 181 in 2-CRP Procedures Manual are met. b. If eligible, FSA recommends conservation practices for application acres, and FSA provides NRCS a copy of CRP-2C. Copy State CREP Coordinator and producer on CRP-2C and map with recommended practices. c. If ineligible based on Federal criteria, FSA notifies producer and copies State CREP coordinator. Explain appeals process to applicant. | a. FSA enters supplemental information related to practices and acres offered into CREP database. b. If eligible, process moves forward with NRCS and State CREP coordinator. c. If ineligible on federal criteria, producer can review with FSA. |
| 3. DOC | a. State CREP Coordinator receives CRP-2C and map from FSA, and reviews for state eligibility, including county cap of 25% of total CREP acres. If not eligible, inform producer of finding and explain review process. State CREP coordinator determines predominant tier of irrigated acres in application, in consultation with FSA office. b. Review water right termination form for manageable unit and eligibility. 1) Identify if water right needs to be divided or if application acres have overlapping water rights. If yes, go to Step 3B. 2) Identify if application acres have both a groundwater right and ditch water irrigation. If yes, go to Step 3C. 3) Identify if application acres unsuitable for dryland farming; if yes, notify owner he/she has option of requesting limited irrigation condition on water right termination to establish vegetative cover. c. After steps 3B & 3C are complete, if needed, and application meets state eligibility, sign water right termination form and forward it to DWR and copy FSA County Office with current status of application and file completion. d. Enter necessary information on application for SUP. e. Check GIS coverage for Tamarisk on application acres; note it on a file with applicant's name and HUC 8. f. Forward to KWO contract sheet for wetland bonus on CP-9, if applicable, with update on application status. g. Notify producer if application meets state eligibility and if all forms are in order. Provide information on State cost share for well plugging and tamarisk control and see if interested in participation. | a. If applicant doesn't meet state eligibility, explain applicant can meet with DOC to review application. Predominant tier will determine SUP rate. b. If needed, CREP coordinator notifies producer to meet with DWR on water right changes, or to get signatures on shareholder agreement and return to DOC (see 3B and 3C). Copy DWR on the referral. Owner may consider limited irrigation option if soils predominantly unsuitable for dryland farming, and discuss it with FSA as part of CPO, and request it from DWR, if desired. c. Inform FSA office and producer on preliminary status of state eligibility and file completion. d. SUP is to be shared with participants in same arrangement as on CRP contract. e. Notify KWO Tamarisk control Program Manager f. Wetland bonus is to be shared with participants in same arrangement as on CRP contract. |

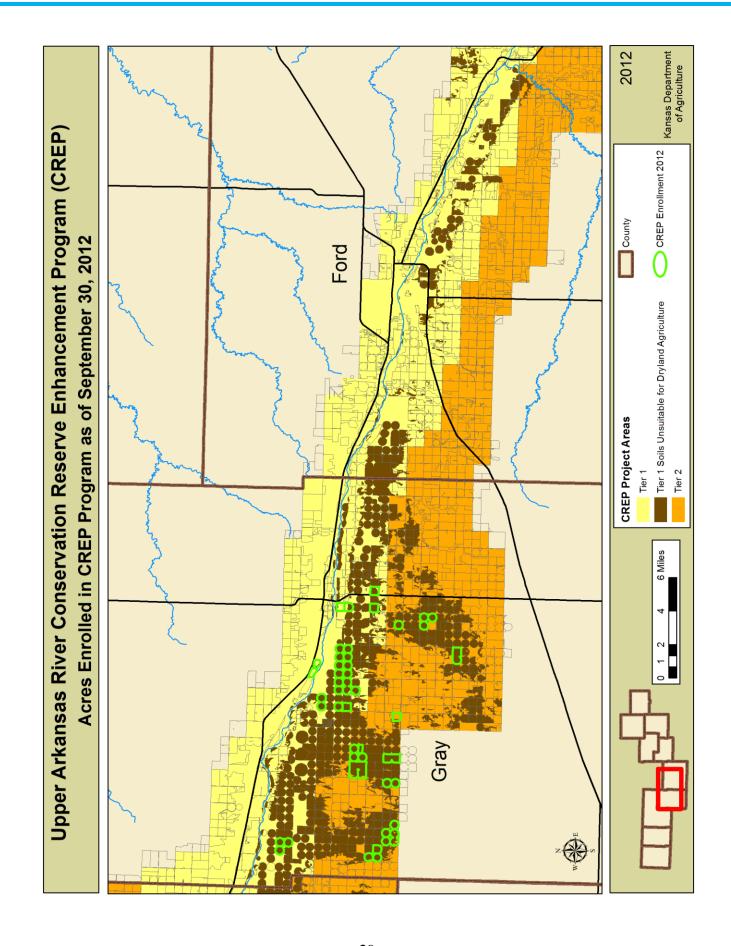
| STEP | ACTION | RESULT |
|--------------------|--|---|
| 3B. DWR and DOC | If needed: a. Applicant meets with DWR or GMD to request necessary changes on water right. DWR or GMD flag change forms as a CREP Application. | a. Water right may need to be legally split or eligible place of use adjusted, so that a manageable unit is available for CREP enrollment. |
| | b. DWR completes process to adjust water right or place of use, so that a water right can be retired on CREP application acres. | b. DWR copies CREP coordinator on changed water right information. |
| | c. State CREP coordinator re-evaluates application based on split water right or adjusted application acres to confirm eligibility and maximum acres. | c. DOC notifies producer and FSA County Office of re-evaluated application, maximum acres and file completeness. |
| 3C. DOC | If needed: a. CREP Coordinator receives a signed copy of CREP Shareholder Agreement (KCREP_SA_03). Application acres with both a ditch surface irrigation and a groundwater right, must file this form to not deliver ditch company surface water on specific tract(s) while enrolled in a CREP contract. b. When CREP Coordinator receives a fully signed form, update CREP database, and notify FSA County office and DWR. | a. Applicant gets Irrigation Association or Ditch Company's signature, and returns signed shareholder agreement to CREP Coordinator. b. Enrolled acres cannot be irrigated by surface water during the life of the CREP contract. The associated groundwater right must be terminated. |
| 4. DWR | Receives owner and DOC signed water right termination form. NOTE: The termination of the water right is conditional upon final approval of CREP contract. The CRP-1 is not approved by the COC at this point. | a. Water right termination form will be held by DWR, and cannot be processed without a copy of producer and FSA signed CRP-1 contract. |
| 5. NRCS | If needed: NRCS makes a site visit to determine suitability of practice, needs and feasibility. | NRCS notify FSA County Office of practice suitability. Use CRP-2C form. |
| 6. FSA and NRCS | a. When DOC indicates application file is complete, FSA makes an appointment with applicant to finalize application at county office. b. FSA completes CRP-2C and CRP-1 for irrigated & dryland acres. c. NRCS develops CPO, and fills out CPA-52, CED completes | a. Finalize application and adjust final contracted acreage at the county office. Enter the effective date and actual contracted acreage and practice totals to the CREP database. |
| | & signs CPA-52. Identify if soil and climate conditions make this site at risk for wind erosion during seeding and special cover crop considerations should be included. | |

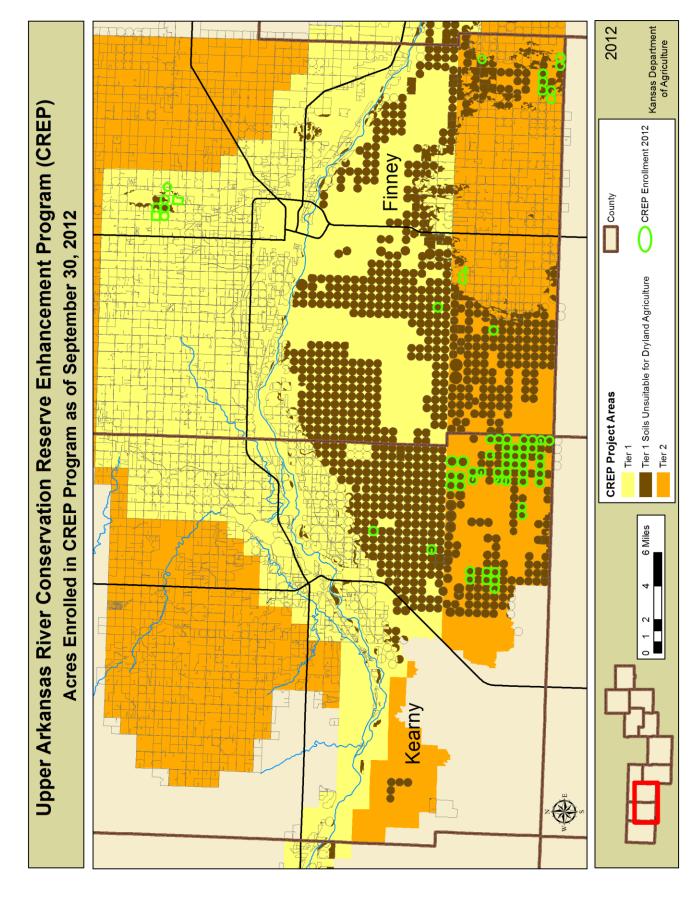
| STEP | ACTION | RESULT |
|--|---|---|
| 7. FSA with producer | a. County FSA meets with producer to complete application materials.b. Producer signs CPO.c. Notify CREP Coordinator Producer has signed CRP-1 | |
| 8. FSA, DWR, and | and CPO a. FSA County office confirms by faxed receipt and | a. FSA notifies producer. |
| DOC DOC | verification of CREP database, that water termination agreement has been signed by producer and evaluated by DWR. b. COC approves CRP-1 and CPO. c. FSA sends a copy of CRP-1 and map to DWR | b. FSA County office updates CREP database with COC approval date. |
| | Appropriations Manager and to State CREP Coordinator, and notifies NRCS. Important: County office must redact (strike) the participants' taxpayer id number(s) prior to providing a copy of the CRP-1 to DWR or DOC. | |
| 9. DWR, DOC, and FSA | a. DWR receives the copy of signed CRP-1 and issues the water right termination order by the Chief Engineer. DWR sends order to owner, with a reminder owner is responsible for filing a copy with County Registrar of Deeds. DWR provides a copy to State CREP coordinator. b. DOC notifies FSA county office of agreement completion, and updates CREP database. | a. As applicable, FSA approves and pays SIP. b. As applicable, State CREP Coordinator approves and pays SUP to participants as share on CRP contract. |
| 10. NRCS or producer, FSA, DOC, and KWO | a. NRCS conducts an on-site review of practice installation and submits to FSA certified AD-862 certifying installation, or producer submitted certification of practice (Form AD-245). b. FSA sends a copy of AD-862 or AD-245 to Pheasants | a. As applicable, FSA issues PIPs, Hydrology, and cost share payments. b. PF/QF pays up to \$500 / producer for seeding cost share. c. KWO pays wetland bonus on CP- 9, to participants as share on CRP contract. |
| | Forever/Quail Forever, and CREP coordinator. c. CREP coordinator notifies KWO of CP-9 practice installation, where eligible for wetland bonus payment, and updates CREP database. | |

ATTACHMENT D

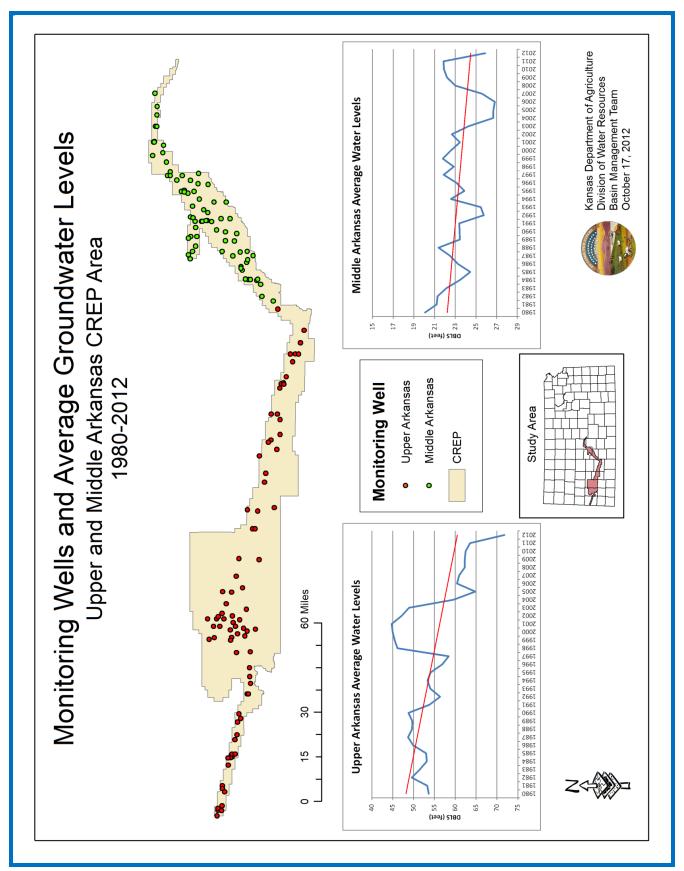
Maps of Acres Offered for Enrollment in the Upper Arkansas River Conservation Reserve
Enhancement Program (CREP) by County as of September 30, 2012

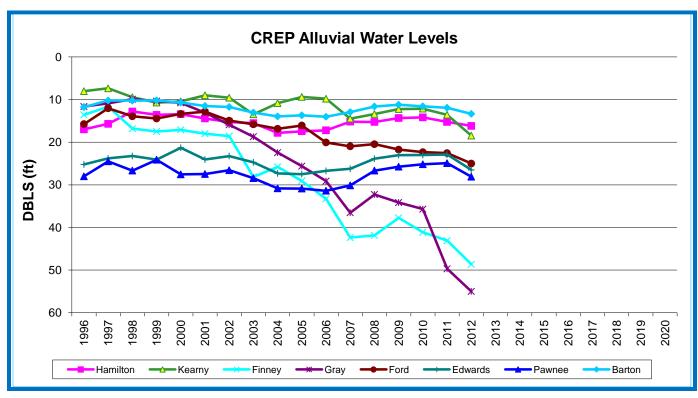


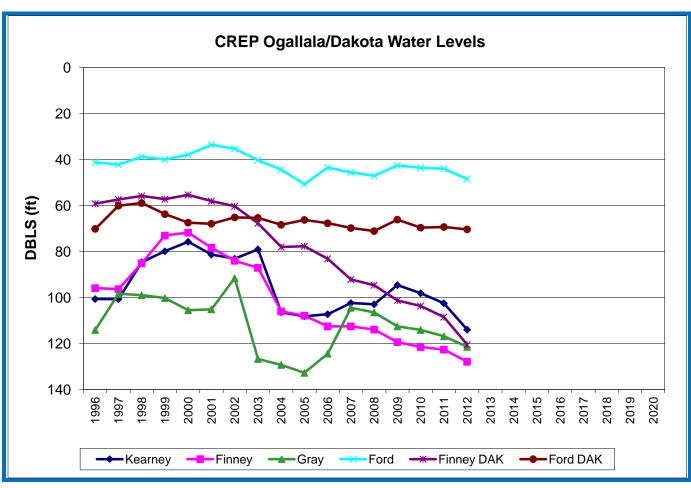




Attachment E Monitoring Wells and Average Groundwater Levels







Attachment F Steering Committee Minutes

CREP Steering Committee Meeting Tuesday, September 25, 2012 10:00 AM DOC Conference Room

Attendees:

Steve Frost (DOC); Carla Wikoff (FSA); Susan Stover & Diane Coe (KWO); Darci Paull (DWR); Tom Stiles (KDHE). **Joining by phone:** Gaye Benfer, Andy Burr, Mark Janzen, Monty Breneman, Chad Volkman, Lyle Frees & Janelle Heiser (NRCS); Mark Rude, Jason Norquest, Chris Law & Trevor Ahring (GMD 3); Orrin Feril (GMD#5); Don Whittemore (KGS); Marc Glades (PF).

Proceedings:

Steve started the meeting with introductions and updating enrollment numbers for the CREP program.

- *15,092 acres have been offered for enrollments (processed and pending)
- * 83 state contracts approved
- * 13,281 irrigated acres have been permanently retired
- * 95 water rights on 120 wells and 28,100 AF of authorized quantity have been permanently retired
- * 99% are in the CP2 practice code for native grasses
- * 85% of enrolled acres are located on "Tier 1" or "Tier 1 Unsuitable" soils
- * \$825,000 paid by state for up front incentive payments
- * \$20 Million (approx.) will be paid out by FSA over the next 14-15 years
- * 2,470 qualifying water rights still potentially eligible for enrollment in the project area

Enrollment has had several peaks and valleys since the project start date on December 20, 2007. Another small peak occurred in October 2011 after irrigated rental rates had been raised by FSA. Sometimes acres are enrolled and approved under a state contract, then withdrawn prior to final CRP-1 approval by FSA due to owner / tenant disagreements, limiting CRP rules, etc. Enrollment has been slow again in 2012 since then with the latest offer coming from Pawnee County. Very high land values and lofty commodity prices are still making it difficult for the nominal irrigated rental rates in CREP to compete for landowner interests.

DOC currently has a FY2013 budget allocation of \$711,286 for CREP which must be shared with WTAP.

The total project limit currently authorized by the Kansas Legislature is currently 28,950 acres with an individual county cap of 7,237.5 acres. The original enabling MOA between USDA and the State of Kansas provides for a total project size not to exceed 40,000 acres. [A revised MOA with USDA was approved on August 23, 2011 and authorizes an approved project limit of 28,950 total acres with an opportunity to increase at a later date. This action raised the individual county cap from 5,000 acres to 7,237.5 acres and allowed some pending applications to then be processed. FSA had also approved increased irrigated rental rates of \$5 - \$15; all project HUCs will now reflect rates of \$110 - \$140.]

The drought seems to be the biggest issue in the program regarding enrollment, establishment and maintenance. Water levels in the project area have been significantly affected. The state's water use criteria is based on the period 2001 to 2005 – the KGS latest information indicates water levels in some parts of the project area have declined over 20 feet in the last five years.

Agency Reports / Special Comments from the Agencies:

FSA – Carla stated that September 30, 2012 will be that last day for enrollment to occur in CRP programs under the current Farm Bill. At this time, Congress has not provided any continuing budget authority for CRP, and therefore, CREP enrollments will be suspended until a new Farm Bill is adopted. From FSA's perspective, the two main challenges for the program again this year have been grass establishment issues (exacerbated by the extreme drought in southern Kansas) and identifying what barriers exist for producers who wish to enroll. Carla reported that FSA has approved a revised schedule of cost-sharing components for producers who have to re-seed both cover crops and grass stands due to the drought.

NRCS – Gaye Benfer discussed the difficulty which the drought is imposing on CREP landowners who are attempting to establish new grass stands and / or maintain existing stands. Many grass stands and cover crops newly seeded from the last two years will have to be re-seeded. NRCS staff members in Kearny, Finney and Gray counties have reported that landowners are experiencing a lot of problems with their ability to irrigate the cover crops and grass seeds for a couple of reasons – 1) some fields were fully established and the producers have since taken off the irrigation systems; and 2) water levels in the areas of CREP enrollments have so decreased significantly in the last few years that full or even partial irrigation is no longer physically possible or economically feasible.

NRCS has assembled a team of plant and soils scientists to evaluate the problems and to identify alternative plant and cultivation strategies. Andy Burr mentioned that the CREP field tour conducted by NRCS in Kearny County on May 22 had been very productive in communicating some of the challenges of successful grass establishment in the CREP project area and in identifying possible techniques which NRCS could be implementing at the field level. Steve Frost mentioned that The Kansas Department of Agriculture had also assisted in the analysis effort by conducting some chemical sampling on selected fields identified by the NRCS team. Mark Janzen reported that NRCS has identified a hardpan layer in these sandy CREP fields which seems to be impairing both root growth and water percolation. NRCS is preparing recommendations regarding cover crop and grass seed substitutes and cultural practices which can be implemented to minimize the drought effects. These recommendations will be presented at a producer meeting in Southwest Kansas before the end of the year.

KWO – Susan Stover commented on some of the current budget / funding issues in the Kansas Legislature and what can be done to extend the CREP programming. Despite interest in wetlands-related activities in other programs, Diane stated that to date no applications have been received for the "shallow water wetland area" practices in the Upper Ark River CREP program, probably because of the high rate of enrollment which are over the dune sands.

DWR – Darci Paull stated that the CREP data base was again updated in June with the Blatant and Recurring Overpumpers list which can affect qualifications with the state criteria for water use eligibility. She reported that the CREP database appears to still be functioning well and offered assistance to any inquiries for assistance.

KDHE – Tom Stiles said that because the Arkansas River is so dry between the Colorado state line and Kinsley, there is essentially no surface water to sample for water quality related data. He reported that conductivity metering at the state line is indicating a slight but gradual decrease over time. Tom stated that their office continues to work on establishing an updated list of 303d impairments (TMDL listings). He noted that KDHE will continue their role in water quality monitoring.

KGS - Don reported that his agency is working on a water resources bulletin related to the Dakota Aquifer. This effort is related to work on the High Plains Atlas which the KGS is compiling. His research has found that approximately 25% of the wells enrolled in CREP are tapping the Dakota Aquifer as well as the High Plains Aquifer. This finding can possibly account for the extremely rapid declines of water levels and yields which some CREP wells are experiencing. Don's staff continues to review information from the water level program and evaluating raw data from various impairment areas.

PF – Marc Glades introduced himself as the new Western Kansas representative for the Kansas Chapter. Although he is new to the CREP project, he looks forward to working with the producers and other partners in the cooperative effort.

GMD3 – Mark discussed the decision-making which landowners and producers are facing in Southwest Kansas as the "water leaves". In response to the KGS report, he noted that irrigators must face a question of whether to try and drill deeper (if they can) in order to "chase the water". The district staff feels there is still interest in CREP enrollments and that potential enhancements can be helpful in securing additional offers. Especially now with the obvious drought impacts, everyone is more and more realizing there is a looming need to get the sandhills covered before the irrigation water runs out and to develop plant and cultural strategies to deal with less and less ability to irrigate grass stands to maturity.

GMD5 – Orin Feril introduced himself as the new manager of the district. He said his staff would continue to promote awareness of CREP and that he would like to gain some enrollment within the District. There seems to be very little interest in the eastern portions of the project area because of the relatively shallow and stable water tables, and also the currently rising market in land values and commodity prices. Steve Frost stated that he would be glad to participate in another GMD#5 landowner information meeting this winter.

Data Needs for Monitoring Results:

It was again noted that many of the monitoring activities which are incorporated in the CREP MOA are difficult for the agencies to significantly undertake at this time – or to determine any significant changes in results or impacts due to the CREP project. Even though enrollment is still increasing at this time, almost the entirety of the enrollment has been located in areas of the Tier 1 / Unsuitable soils which will require continued irrigation for another couple of years. We have yet not seen any significant water use curtailment to monitor.

Enhancing Enrollment during 2012 – 2013:

Kansas is still looking for more ways to increase interest and enrollment in CREP. DOC, KWO and the GMDs will work to re-market and promote the program noting the higher rates and the successes of the grass establishment strategies.

Recommendations for Future Modifications to CREP Program Rules / Procedures:

No other items for future program changes were specifically forthcoming at this time. A general discussion about the state's FY2014 budget forecasts and the possible ramifications to future CREP funding followed. On the state side, the program is currently authorized by the Kansas Legislature until June 30, 2013.

Identification of Other Issues:

Several questions / issues were raised in general discussion about the program implementation. A question was asked about the drought effects on emergency haying / grazing provisions. Carla Wikoff fielded several questions about the potential CREP program impacts of various Farm Bill drafts. At this time, little is known for certain about the implications of next year's budget forecasts on CRP authorization in a possible "Farm Bill".

In regard to the annual report, Steve asked that all the entities get their costs and narratives of activities in by early October. The report is based on the federal fiscal year, October 1, 2011 to September 30, 2012.

Conclusion:

The members were sincerely thanked for their time and efforts in fulfilling the mission of the CREP program. The meeting was concluded at 11:13 AM.